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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,835	12/29/2003	Roel Domingo Villanueva	GYTR / 18	6184

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EXAMINER	
KNABLE, GEOFFREY L	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/747,835	VILLANUEVA ET AL.	
	Examiner	Art Unit	
	Geoffrey L. Knable	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *9-12 and 17-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 13-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/26/04;4/29/04;6/23/05*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

I: the embodiment of figs. 1-3;

II: the embodiment of fig. 4.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim appears to be generic to both embodiments.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the

case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with William Allen on September 7, 2005 a provisional election was made with traverse to prosecute the invention of species I, claims 1-8 and 13-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-12 and 17-19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Claims 1-8 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In light of the claim 6, when read in light of the disclosure as a whole, it is not entirely clear what characterizes a "shoulder layer" in any of the claims and how this layer is to be distinguished from other layers. In particular, claim 6 defines a very specific belt configuration that includes six cut belts, two spiral belt layers and six spiral wound shoulder layers - this is presumed to be intended to correspond to or at least be consistent with the depicted and described embodiment of figs. 1-3. However, while

this embodiment clearly has six cut belt layers and two spiral belt layers, it is not entirely clear how this can be described as having six spiral shoulder layers, at least when read consistent with the description of the layers in the specification, i.e. in which the layer/turn "54" is described as being a turn of the spiral wound layer 34 and thus *not* part of the spiral wound shoulder layers. In other words, if "54" is not part of the shoulder layers (as described, this being consistent with the other description of these layers since it is not at a lower pitch), then there would not appear to be any more than 5 overlapped layers/turns that are actually described as shoulder layers in the specification. As such, it is not entirely clear that the artisan can clearly and unambiguously determine what constitutes a "shoulder layer" and what constitutes a spiral belt layer and as such, the scope of the claims is considered to be indefinite. Clarification is required of this apparent inconsistency.

Along somewhat similar lines, clarification is required of whether claim 2 is intended to be consistent with the illustrated embodiment in figs. 1-3, it being noted that it does not appear that any of what are described as being the spirally wound belt layers overlaps what are described as the shoulder layers. Further, although it could be argued that turn/layer "52" does overlap the other shoulder layers, it is described as being one of the spiral shoulder layers and thus not part of the spiral wound belt layer. Clarification is therefore required of this apparent inconsistency as well, it being noted that both of these ambiguities seem to stem from how to characterize the turn(s)/layer(s) that are at the end of the spiral belt and beginning of the shoulder layers.

In claims 8 and 16, it would seem arguably technically inconsistent to refer to a "zero degree spiral" as it does not seem that a *spiral* winding could be actually at zero degrees.

In claim 16, no antecedent has been established for "said plurality of spiral wound shoulder layers", it being noted that claim 13 does not refer to shoulder "layers".

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 2, 5, 8, 13, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Oare et al. (US 5,115,853).

Oare et al. discloses a pneumatic tire comprising a carcass (e.g. 31 in fig. 3), a tread (42) disposed radially outward of said carcass, a sidewall intersecting said tread at a shoulder, and a belt reinforcing structure positioned radially between said carcass and said tread, the belt reinforcing structure including what would have been understood as a plurality of cut belts (32-34), a plurality of spiral wound belt layers positioned radially between said plurality of cut belts and said tread (note overlay 36), the overlay also including a plurality of spiral wound shoulder layers overlapping at least said plurality of cut belts proximate said shoulder, said plurality of spiral wound belt layers and said plurality of spiral wound shoulder layers formed by a continuous cord-reinforced strip (37) having a strip width, said plurality of spiral wound belt layers being described as in abutting relationship (col. 3, lines 18-22) and thus would be characterized by a first winding pitch equal to one strip width per revolution and said plurality of spiral wound shoulder layers characterized by overlapping of adjacent windings and thus they are at a second winding pitch of less than one strip width per revolution (e.g. col. 3, lines 1-25). A tire as described required by claim 1 and the corresponding method as required by claim 13 is therefore considered to be taught by Oare et al.

As to claim 2, as the depicted/described winding progresses from one side to the other of the tire belt, it is considered that the last overlapped/shoulder turn (on the initially wound shoulder) would overlap the first turn of the central region, this being considered to satisfy this claim. As to claims 5 and 14, the 80% overlap suggested at

col. 3, line 24 would correspond to the claimed 0.2 pitch. As to claims 8 and 16, the 0 to 5 degree winding suggested in the reference (e.g. col. 3, lines 1-4) is considered to discloses a zero degree spiral winding as claimed.

9. Claims 3 and 4 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oare et al. (US 5,115,853).

As to claim 3, the figure 3 depiction shows four layers in the shoulder. Further, it would seem that the described 80-95% overlap would necessarily lead to a large number of layers. This reference is therefore considered to suggest four shoulder layers as claimed. Although Oare et al. does not explicitly show this with the described but not illustrated abutting central layer, it is submitted that this is either implicit from the reference teachings read as a whole or in any event certainly obvious, there being no indication that the side layers would be altered depending upon the amount of overlap of the central layers. As to claim 4, the 80% overlap suggested at col. 3, line 24 would correspond to the claimed 0.2 pitch.

10. Claim 6 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Oare et al. (US 5,115,853) as applied above, and further in view of at least one of [Takatsu et al. (US 5,277,236) and Assaad et al. (US 5,385,190)].

As to claim 6, Oare et al. seems to contemplate more than two belt layers (e.g. note the reference to "at least two belt plies" at col. 1, lines 48-52) as well as an overlay that includes two central layers (e.g. figs. 1 and 2) and a larger number of shoulder layers (fig. 3) but does not explicitly describe six cut belt layers belt layers and six spiral shoulder layers. It however is known and conventional in this art, especially for high

speed tires for e.g. aircraft, to provide a large number of cut belt plies including for example six such plies - e.g. note Assad et al. (col. 1, lines 9-18; col. 2, lines 17-28) as well as Takatsu et al. (col. 5, lines 50+) to assure tire durability during takeoff/landing, it being therefore considered to have been obvious to provide six belt plies, especially for an aircraft tire, to assure adequate tire durability. As to the number of shoulder layers, Oare et al. depicts what would appear to be 5 overlapped plies in the shoulder but is clearly not limited to the depicted configuration in terms of the degree of overlap, it being considered that the described range of shoulder overlap of 80-95% would have rendered obvious a configuration including a larger number of overlapped shoulder plies in the shoulder for only the expected results.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oare et al. (US 5,115,853) in view of at least one of [Takatsu et al. (US 5,277,236) and Assaad et al. (US 5,385,190) as applied to claim 6 above, and further in view of Maathuis et al. (US 5,007,974).

As to claim 7, Maathuis et al. relates to a similar wound overlay structure to Oare et al. (e.g. col. 3, lines 13-20) and in particular indicates that it is desirable to provide radial layers at the shoulder edge that are apparently at a zero degree pitch - note esp. layers 26, 27, 28 (col. 3, lines 29-54), it being considered to have been obvious to include radial windings at the edge in light of this teaching.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oare et al. (US 5,115,853) as applied to claim 13 above, and further in view of Maathuis et al. (US 5,007,974).

As to claim 15, Oare et al. seems to desire that there be more than one layer in the central overlap region (e.g. note figs. 1 and 3) but does not explicitly describe two windings of abutting turns to effect this. Maathuis et al. relates to a similar wound overlay structure (e.g. col. 3, lines 13-20) and in particular indicates that two layers are desirably provided in the central region, this being accomplished by separate windings - note esp. col. 3, lines 33-38, it being therefore considered obvious top provide the central overlap in the form of two windings to accomplish the two layers as claimed.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Damke et al. (US 5,795,417 - esp. figs. 11-14), Yamaguchi et al. (US 5,373,886), Iuchi (US 5,396,941), Yukawa et al. (US 2004/0089392 - esp. figs. 17 and 26) and Tanaka (US 2002/0026979) all also show tires including spiral belt layers that include overlapping turns in the shoulder but are at least at present no more relevant than the applied prior art.

Bormann et al. (US 4,869,307) shows spiral belt layers with greater shoulder overlap but is less relevant than the applied prior art.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
September 16, 2005